WHAT IS CLAIMED IS:

1. A method of searching for an embedded signal in a first signal, comprising:

producing a plurality of first correlated values from a portion of the first signal and a second signal;

transforming the first correlation values into a plurality of second correlation values related to a frequency content of the first correlation values; and

searching for the embedded signal by evaluating the second correlation values.

2. The method of claim 1 wherein the embedded signal comprises a pilot signal.

3. The method of claim 2 wherein the embedded signal comprises a pilot signal spread by a code, and the second signal comprises a replica of the code.

4. The method of claim 3 wherein the code comprises a pseudo-random code.

5. The method of claim 4 wherein the first and second signals each comprises a plurality of chips.

6. The method of claim 5 wherein the portion of the first signal and the second signal each comprises 96 chips.

7. The method of claim 1 wherein the production of the first correlation values comprises multiplying the first signal portion with the second signal to produce a plurality of product values, and coherently combining different portions of the product values to produce a plurality of coherent sums each comprising one of the first correlation values.

8. The method of claim 7 wherein the coherent combination of the different product value portions produces three coherent sums.

9. The method of claim 7 wherein the multiplication of the first signal portion with the second signal produces 96 product values.

10. The method of claim 9 wherein the coherent combination of the different product value portions comprises coherently combining three different product value portions each comprising 32 product values.

11. The method of claim 1 wherein the transformation of the first correlation values comprises a Fourier transform.

12. The method of claim 11 wherein the Fourier transform comprises a discrete Fourier transform.

13. The method of claim 11 wherein the Fourier transform comprises a fast Fourier transform.

14. A method of searching for an embedded signal in a first signal, comprising:

correlating the first signal with a second signal by adjusting a phase of the first signal with respect to the second signal to produce a plurality of first correlated values for each of the first signal phases;

transforming the first correlated values for each of the first signal phases into a plurality of second correlation values related to a frequency content of their respective first correlation values; and

searching for the embedded signal by evaluating the second correlation values.

15. The method of claim 14 wherein the correlation of the first and second signals further comprises multiplying a different portion of the first signal with the second signal to produce a plurality of product values for each of the

first signal phases, and for each of the first phase signals, coherently combining different portions of the respective product values to produce a plurality of coherent sums each comprising one of the first correlation values.

16. The method of claim 14 wherein the embedded signal comprises a pilot signal.

17. The method of claim 16 wherein the embedded signal comprises a pilot signal spread by a code, and the second signal comprises a replica of the code.

18. The method of claim 17 wherein the code comprises a pseudo-random code.

19. The method of claim 14 wherein the transformation of the first correlation values comprises a Fourier transform.

20. The method of claim 19 wherein the Fourier transform comprises a discrete Fourier transform.

21. The method of claim 19 wherein the Fourier transform comprises a fast Fourier transform.

22. The method of claim 14 wherein the frequency content of the first correlation values for each of the first signal phases comprises a plurality of frequency components, the second correlation values for each of the first signal phases each corresponding to a different one of the frequency components.

23. The method of claim 22 wherein the embedded signal search comprises identifying the second correlation value with a maximum magnitude, and selecting the frequency component of the identified second correlation value.

24. The method of claim 22 wherein the embedded signal search comprises identifying the second correlation value with a maximum magnitude over a first portion of the first signal phases and identifying the second correlation value with a maximum magnitude over a second portion of the first signal phases, noncoherently combining the second correlation values for the frequency components having the identified second correlation values to produce a plurality of third correlation values, and using the third correlation value having a maximum magnitude to determine whether the embedded signal is present.

25. A searcher, comprising:

a correlator configured to produce a plurality of first correlation values from first and second signals;

a processor configured to transform the first correlation values into a plurality of second correlation values each relating to a different frequency component of the first signal; and

a detector configured to monitor the second correlation values over a time period, and select one of the frequency components having a peak second correlation value.

26. The searcher of claim 25 wherein the correlator comprises a multiplier configured to multiply the first signal with the second signal to produce a plurality of product values, and a plurality of adders each configured to coherently combine different portions of the product values to produce a plurality of coherent sums each comprising one of the first correlation values.

27. The searcher of claim 26 wherein the correlator further comprises a buffer configured to provide the first signal to the multiplier.

28. The searcher of claim 27 wherein the buffer comprises a shift register.

29. The searcher of claim 27 wherein the buffer comprises a plurality of delay elements configured to sequentially receive the chips, at least a portion of the delay elements each providing one chip to the multiplier.

30. The searcher of claim 29 wherein the multiplier comprises a plurality of multipliers each configured to receive one of the chips of the first signal.

31. The searcher of claim 30 wherein the second signal comprises a plurality of chips, and each multiplier is further configured to receive one of the chips of the second signal.

32. The searcher of claim 31 wherein the multiplier comprises 96 multipliers each producing one product value.

33. The searcher of claim 32 wherein the plurality of adders comprises three adders each configured to coherently combine the different product value portions each comprising 32 product values.

34. The searcher of claim 25 wherein the processor comprises a Fourier transform.

35. The searcher of claim 34 wherein the Fourier transform comprises a discrete Fourier transform.

36. The searcher of claim 34 wherein the Fourier transform comprises a fast Fourier transform.

37. The searcher of claim 25 wherein the detector is further configured to monitor the second correlation values over a second time period, and select a second one of the frequency components having a peak second correlation value over the second time period.

38. The searcher of claim 37 wherein the selected frequency components for both time periods each comprises a portion of the second correlation values each having a complex value, the searcher further comprising a converter configured to convert each of the complex values into a magnitude

value, and an adder configured to noncoherently combine the second correlation values for the time period with the second correlation values for the second time period.

39. The searcher of claim 38 wherein the selected frequency components for both time periods are the same frequency component.

40. The searcher of claim 38 further comprising a second detector configured to detect a peak value for the noncoherently combined second correlation values.

41. A searcher, comprising:

means for producing a plurality of first correlation values from first and second signals;

means for transforming the first correlation values into a plurality of second correlation values each relating to a different frequency component of the first signal;

means for monitoring the second correlation values over a time period; and

means for selecting one of the frequency components having a peak second correlation value.

42. The searcher of claim 41 wherein the means for producing the first correlation values comprises means for multiplying the first signal with the second signal to produce a plurality of product values, and means for coherently combining different portions of the product values to produce a plurality of coherent sums each comprising the one of the first correlation values.

43. The searcher of claim 42 wherein the means for producing the first correlation values further comprises means for buffering the first signal to be multiplied with the second signal.

44. The searcher of claim 41 wherein the means for transforming the first correlation values comprises a Fourier transform.

45. The searcher of claim 44 wherein the Fourier transform comprises a discrete Fourier transform.

46. The searcher of claim 44 wherein the Fourier transform comprises a fast Fourier transform.

47. The searcher of claim 41 further comprising means for monitoring the second correlation values over a second time period, and means for selecting one of the frequency components having a peak second correlation value over the second time period.

48. The searcher of claim 47 wherein the selected frequency components for both time periods each comprises a portion of the second correlation values each having a complex value, the searcher further comprising means for converting each of the complex values into a magnitude value, and means for noncoherently combining the second correlation values for the time period with the second correlation values for the second time period.

49. The searcher of claim 48 wherein the selected frequency components for both time periods are the same frequency component.

50. The searcher of claim 48 further comprising means for detecting a peak value for the noncoherently combined second correlation values.

51. Computer-readable media embodying a program of instructions executable by a computer program to perform a method of searching for an embedded signal in a first signal, comprising:

producing a plurality of first correlated values from a portion of the first signal and a second signal;

transforming the first correlation values into a plurality of second correlation values related to a frequency content of the first correlation values; and

searching for the embedded signal by evaluating the second correlation values.

52. The computer-readable media of claim 51 wherein the embedded signal comprises a pilot signal.

53. The computer-readable media of claim 52 wherein the embedded signal comprises a pilot signal spread by a code, and the second signal comprises a replica of the code.

54. The computer-readable media of claim 53 wherein the code comprises a pseudo-random code.

55. The computer-readable media of claim 54 wherein the first and second signals each comprises a plurality of chips.

56. The computer-readable media of claim 55 wherein the portion of the first signal and the second signal each comprises 96 chips.

57. The computer-readable media of claim 51 wherein the production of the first correlation values comprising multiplying the first signal portion with the second signal to produce a plurality of product values, and coherently combining different portions of the product values to produce a plurality of coherent sums each comprising one of the first correlation values.

58. The computer-readable media of claim 57 wherein the coherent combination of the different product value portions produces three coherent sums.

59. The computer-readable media of claim 57 wherein the multiplication of the first signal portion with the second signal produces 96 product values.

60. The computer-readable media of claim 59 wherein the coherent combination of the different product value portions comprises coherently combining three different product value portions each comprising 32 product values.

61. The computer-readable media of claim 51 wherein the transformation of the first correlation values comprises a Fourier transform.

62. The computer-readable media of claim 61 wherein the Fourier transform comprises a discrete Fourier transform.

63. The computer-readable media of claim 61 wherein the Fourier transform comprises a fast Fourier transform.

64. Computer-readable media embodying a program of instructions executable by a computer program to perform a method of searching for an embedded signal in a first signal, comprising:

correlating the first signal with a second signal by adjusting a phase of the first signal with respect to the second signal to produce a plurality of first correlated values for each of the first signal phases;

transforming the first correlated values for each of the first signal phases into a plurality of second correlation values related to a frequency content of their respective first correlation values; and

searching for the embedded signal by evaluating the second correlation values.

65. The computer-readable media of claim 64 wherein the correlation of the first and second signals further comprises multiplying a different portion of the first signal with the second signal to produce a plurality of product values for each of the first signal phases, and for each of the first phase signals, coherently combining different portions of the respective product values to produce a plurality of coherent sums each comprising one of the first correlation values.

66. The computer-readable media of claim 64 wherein the embedded signal comprises a pilot signal.

67. The computer-readable media of claim 66 wherein the embedded signal comprises a pilot signal spread by a code, and the second signal comprises a replica of the code.

68. The computer-readable media of claim 67 wherein the code comprises a pseudo-random code.

69. The computer-readable media of claim 64 wherein the transformation of the first correlation values comprises a Fourier transform.

70. The computer-readable media of claim 69 wherein the Fourier transform comprises a discrete Fourier transform.

71. The computer-readable media of claim 69 wherein the Fourier transform comprises a fast Fourier transform.

72. The computer-readable media of claim 64 wherein the frequency content of the first correlation values for each of the first signal phases comprises a plurality of frequency components, the second correlation values for each of the first signal phases each corresponding to a different one of the frequency components.

73. The computer-readable media of claim 72 wherein the embedded signal search comprises identifying the second correlation value with a maximum magnitude, and selecting the frequency component of the identified second correlation value.

74. The computer-readable media of claim 72 wherein the embedded signal search comprises identifying the second correlation value with a maximum magnitude over a first portion of the first signal phases and identifying the second correlation value with a maximum magnitude over a second portion

of the first signal phases, noncoherently combining the second correlation values for the frequency components having the identified second correlation values to produce a plurality of third correlation values, and using the third correlation value having a maximum magnitude to determine whether the embedded signal is present.

75. A searcher, comprising:

a correlator configured to produce a plurality of first correlation values from first and second signals;

a Fourier transform configured to transform the first correlation values into a plurality of second correlation values; and

a detector configured to monitor the second correlation values over a time period, and select the second correlation value having a maximum magnitude.

76. The searcher of claim 75 wherein the correlator comprises a multiplier configured to multiply the first signal with the second signal to produce a plurality of product values, and a plurality of adders each configured to coherently combine different portions of the product values to produce a plurality of coherent sums each comprising one of the first correlation values.

77. The searcher of claim 76 wherein the correlator further comprises a buffer configured to provide the first signal to the multiplier.

78. The searcher of claim 78 wherein the buffer comprises a shift register.

79. The searcher of claim 77 wherein the buffer comprises a plurality of delay elements configured to sequentially receive the chips, at least a portion of the delay elements each providing one chip to the multiplier.

80. The searcher of claim 79 wherein the multiplier comprises a plurality of multipliers each configured to receive one of the chips of the first signal.

81. The searcher of claim 80 wherein the second signal comprises a plurality of chips, and each multiplier is further configured to receive one of the chips of the second signal.

82. The searcher of claim 81 wherein the multiplier comprises 96 multipliers each producing one product value.

83. The searcher of claim 82 wherein the plurality of adders comprises three adders each configured to coherently combine the different product value portions each comprising 32 product values.

84. The searcher of claim 75 wherein the Fourier transform comprises a discrete Fourier transform.

85. The searcher of claim 75 wherein the Fourier transform comprises a fast Fourier transform.

86. The searcher of claim 75 wherein the detector is further configured to monitor the second correlation values over a second period of time, and select the second correlation value having a maximum magnitude over the second time period.